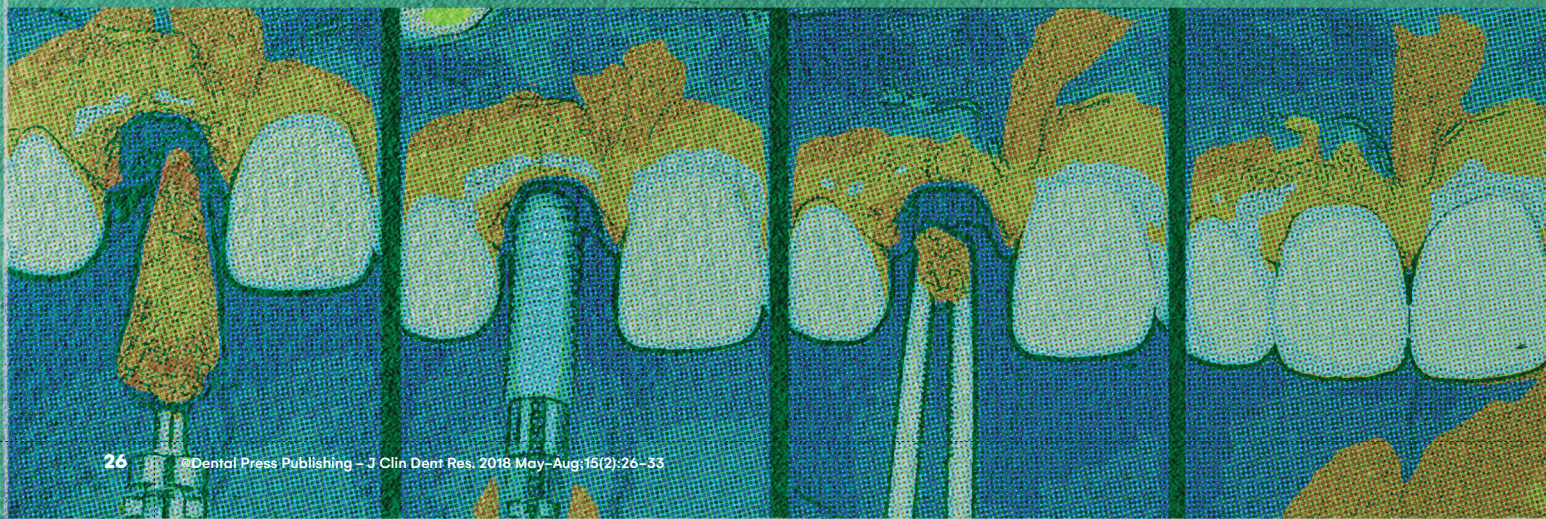


The importance of provisionalization in immediate implants

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In our previous issue, I discussed the importance of following the correct steps for the placement of immediate implants. I also claimed that one of the essential steps for the success of such procedure is the correct provisionalization. Well, let us talk a little about this topic now.

One of the fears of using the immediate implant technique in the esthetic zone is the appearance of the area of transition from gingival tissue to definitive ceramic crown. We should understand that this 3 to 4 mm of transmucosal area that separates the implant platform from the buccal gingival contour line is valuable, both esthetically and biologically. A proper soft tissue thickness in this area is important to ensure peri-implant health in the long run. What defines the volume, morphology and esthetic appearance of this gingival tissue is how we guide its healing. The strategy to guide healing in the transmucosal area may include the use of conventional healing components (healing caps), or the fabrication of a customized immediate provisional crown. This strategy will be responsible for the creation of the prosthetic emergence profile in the implanted region, and its final architecture will be directly associated with the technique chosen by the dentist. And I tell you, dear reader, that the best strategy to ob-

tain an ideal emergence profile is the use of a customized immediate provisional crown, which has the fundamental role of creating the definitive profile¹. Regardless of the technique used for the fabrication of the immediate provisional crown, whether analogical or digital, there are some principles that should be strictly followed. The first is to understand what parameters we can use to customize the transmucosal area of the provisional. The concept of critical and subcritical contours² is the ideal reference for the customization of the provisional crown emergence profile. The critical contour of the provisional crown should coincide with the cervical contour of the gingival tissue — This contour begins in the outer end of the gingival margin and extends apically for 1 mm. It is the reference for the ideal position of the buccal margin of the gingiva, as well as of the interdental papillae, and should provide support and preserve the original architecture of the soft tissue. All the area from the critical contour to the implant platform is called the subcritical contour. This is the area of the provisional crown that holds the responsibility for the creation of the prosthetic emergence profile, and is also called transmucosal area. The design that the dentist creates when customizing the provisional crown profile is the negative image of the definitive shape of the prosthetic gingival emergence profile³.

In other words, if the subcritical contour is convex, the result will be a newly formed soft tissue that is thinner than that obtained when the subcritical contour has a concave design. Therefore, our aim should be to preserve soft tissue with thickness of 2 to 3 mm in the buccal area of the emergence profile to ensure greater tissue stability in the long run. For that purpose, a concave design should always be chosen when customizing the subcritical contour. I should remind you that these measures of tissue thickness are only achieved if tridimensional positioning of the implant is adequate, as discussed in the previous issue. Let us critically analyze it together: if the implant platform is corono-apically positioned at 3 to 4 mm from the zenith of the buccal gingival contour, and bucco-palatally 3 mm from the buccal gingival edge, we create a free area to induce new soft tissue formation according to the subcritical contour of the provisional crown. This free area is called a soft tissue gap (STG). Another principle that should be followed is that, even if the provisional crown is in infraocclusion and cannot receive great loads for the next months, every minimal stimulus received from the patient's lips and tongue accelerates osseointegration, differently from the absence of any stimuli, and the definitive ceramic crown can be fabricated at a shorter time⁴. Based on what was described above, the

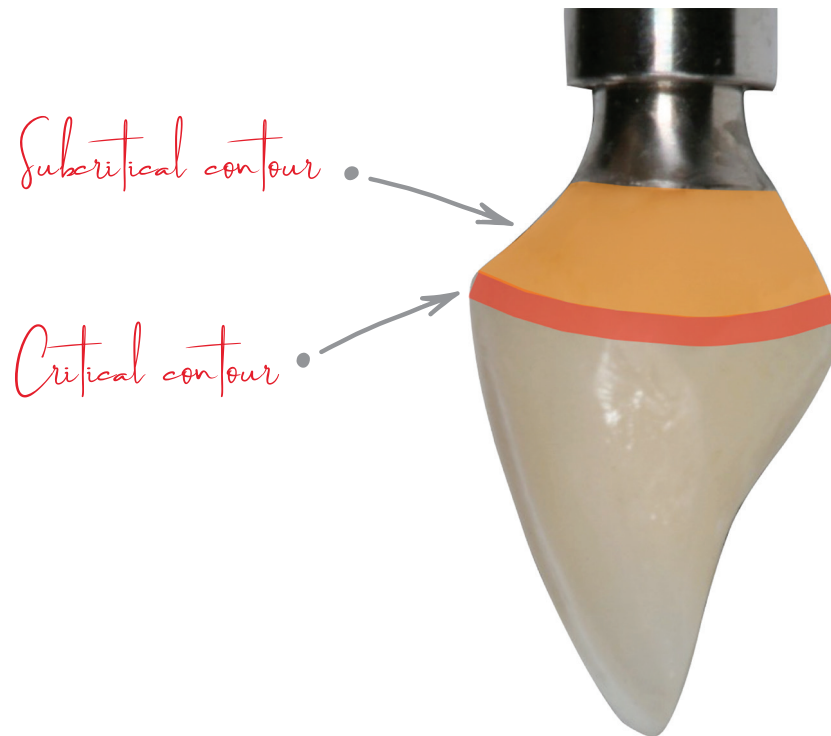
implant impression and the final abutment can be performed 3 to 4 months later. But this is a topic to be discussed in our next issue. As a final message, here is a tip: you are responsible for creating an ideal prosthetic emergence profile! You only have to adopt the correct principles of customization of provisional crowns fabricated by your own hands. See you soon! ●



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Figure 1:

Provisional crown areas corresponding to critical and subcritical contours.

**Figure 2 to 4:**

View after implantation and grafting.
Design of provisional crown guides
formation of transmucosal area.
Emergence profile created using
customized provisional crown.

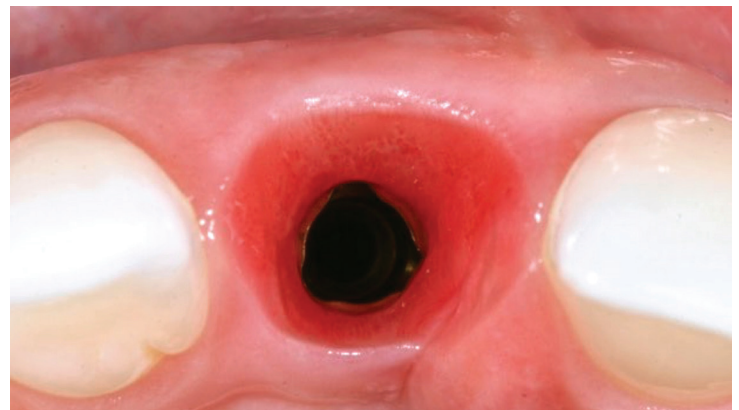
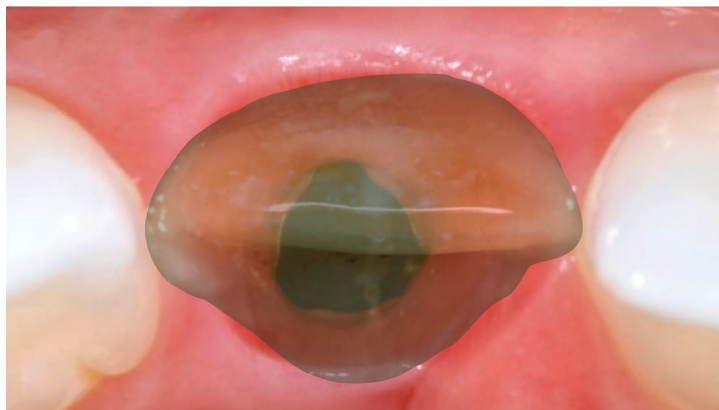
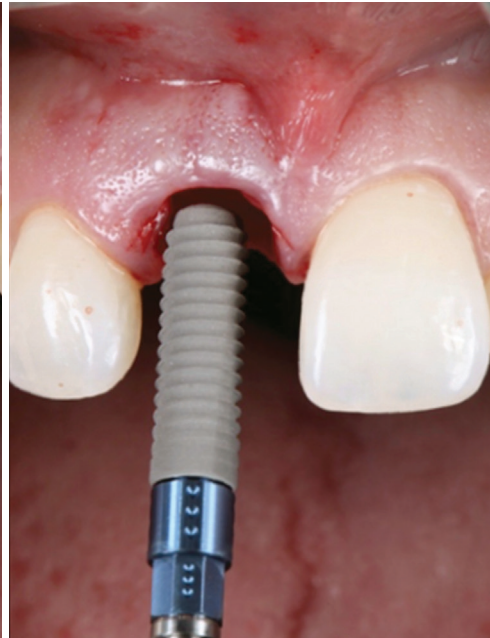




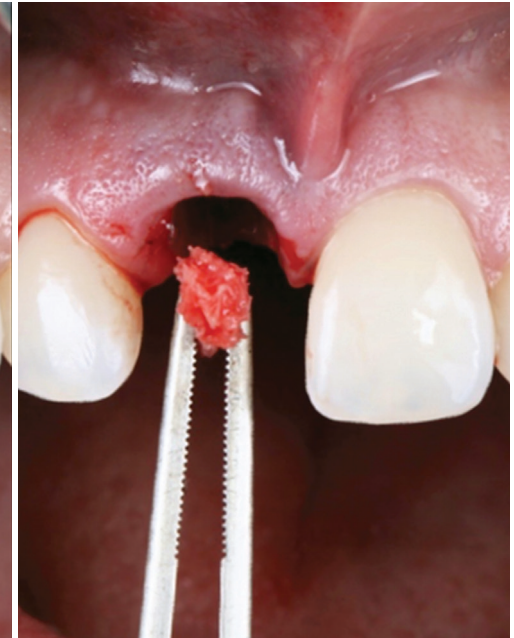
Figure 5:

Provisional crowns with different critical and subcritical contour designs. Convex contour results in smaller soft tissue volume and slightly repositions gingival contour apically. Concave design, in addition to preserving ideal position of gingival contour, provides greater gain in soft tissue thickness.

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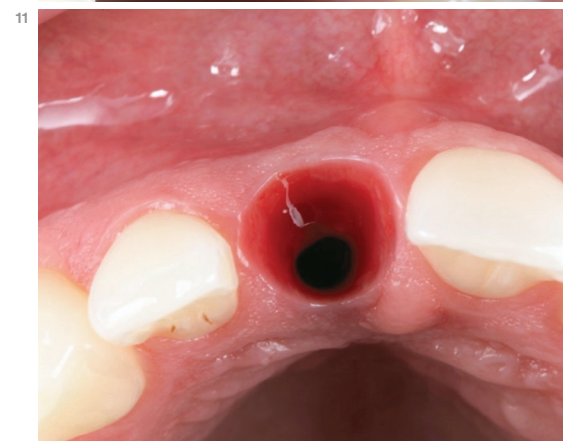
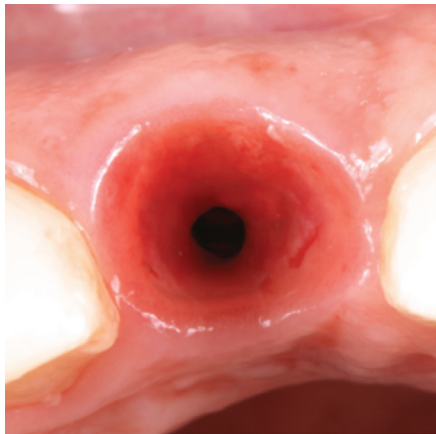
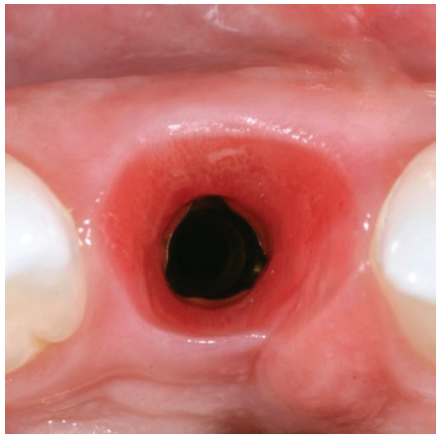


Figure 6 to 11:

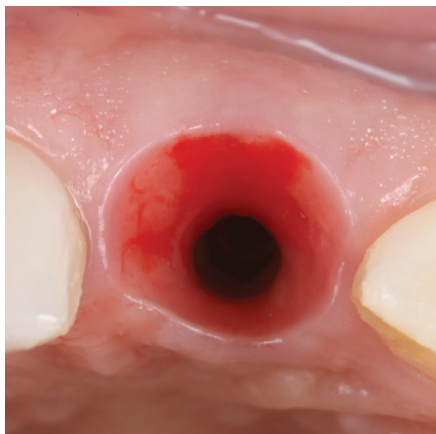
Clinical sequence, from extraction to provisionalization. Thickness of 3.5 mm obtained in emergence profile.



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Figure 12 to 14:

Three successful outcomes of emergence profiles. Note that implant platform can be seen in Figure 13 because conventional connection was used. In Figures 12 and 14, implant platform is not clearly seen, because platform switching was used — diameter is smaller than that of implant platform, which provides even greater soft tissue gain.



Figure 15:

Clinical aspect of immediate implantation and placement of healing cap. Note loss of gingival architecture.

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